What is claimed is:

1. A radiographic image conversion panel comprising:

a support; and

at least one photostimulable phosphor layer provided on the support,

wherein at least one layer of the photostimulable phosphor layers is formed by a photostimulable phosphor represented by a following general formula (1), and

an amount of activation metal atoms at an end of a photostimulable phosphor crystal and an amount of activation metal atoms in the vicinity of the support satisfy a following formula 1:

$0 \leqq$ (the amount of the activation metal atoms at the end of the photostimulable phosphor crystal)/(the amount of the activation metal atoms in the vicinity of the support) < 1, and

the general formula (1) is expressed by

$$M^1X \cdot aM^2X'_2 \cdot bM^3X''_3 : eA \qquad (1)$$

wherein the M^1 is at least one kind of alkali metal selected from a group consisting of Li, Na, K, Rb and Cs, the M^2 is at least one kind of bivalent metal atom selected from a group consisting of Be, Mg, Ca, Sr, Ba, Zn, Cd, Cu and Ni, the M^3 is at least one kind of trivalent metal atom selected from a group consisting of Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Al, Ga and In,

each of the X, the X' and the X" is at least one kind of halogen selected from a group consisting of F, Cl, Br and I, the A is at least one kind of metal atom selected from a group consisting of Eu, Tb, In, Ce, Tm, Dy, Pr, Ho, Nd, Yb, Er, Gd, Lu, Sm, Y, Tl, Na, Ag, Cu and Mg and each of the a, the b and the e represents a numeric value in a range of $0 \leqq a < 0.5$, $0 \leqq b < 0.5$ and $0 < e \leqq 0.2$.

2. A radiographic image conversion panel comprising:

a support; and

at least one photostimulable phosphor layer provided on the support,

wherein at least one layer of the photostimulable phosphor layers contains a photostimulable phosphor using an alkali halide represented by a following general formula (1) as a ground material, and

the photostimulable phosphor layer is formed so as to have a thickness from 50 μm to 20 mm by a vapor phase growth method, and a mean crystal size in the photostimulable phosphor of the photostimulable phosphor layer is from 90 to 1000 nm, and

the general formula (1) is expressed by

$$M^1X \cdot aM^2X'_2 \cdot bM^3X''_3 : eA \qquad (1)$$

wherein the M^1 is at least one kind of alkali metal selected from a group consisting of Li, Na, K, Rb and Cs,

the M^2 is at least one kind of bivalent metal atom selected from a group consisting of Be, Mg, Ca, Sr, Ba, Zn, Cd, Cu and Ni, the M^3 is at least one kind of trivalent metal atom selected from a group consisting of Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Al, Ga and In, each of the X, the X' and the X" is at least one kind of halogen selected from a group consisting of F, Cl, Br and I, the A is at least one kind of metal atom selected from a group consisting of Eu, Tb, In, Ce, Tm, Dy, Pr, Ho, Nd, Yb, Er, Gd, Lu, Sm, Y, Tl, Na, Ag, Cu and Mg and each of the a, the b and the e represents a numeric value in a range of $0 \leqq a < 0.5$, $0 \leqq b < 0.5$ and $0 < e \leqq 0.2$.

3. The radiographic image conversion panel of claim 1, wherein the photostimulable phosphor is CsBr:Eu.

4. The radiographic image conversion panel of claim 2, wherein the photostimulable phosphor is CsBr:Eu.

5. A method for manufacturing the radiographic image conversion panel of claim 1, comprising controlling a deposition rate of a main agent of the photostimulable phosphor and a deposition rate of an activator of the photostimulable phosphor by at least two or more systems.

6. A method for manufacturing the radiographic

image conversion panel of claim 2, comprising controlling a deposition rate of a main agent of the photostimulable phosphor and a deposition rate of an activator of the photostimulable phosphor by at least two or more systems.

7. A method for manufacturing a radiographic image conversion panel comprising a support and a photostimulable phosphor layer provided on the support; the method comprising adding Rb atoms to a photostimulable phosphor of the photostimulable phosphor layer so that a ratio of the Rb atoms to Cs atoms is 1/1,000,000 to 5/1,000 mol.

8. A radiographic image conversion panel comprising a photostimulable phosphor obtained by the method for manufacturing the radiographic image conversion panel of claim 7, wherein in the photostimulable phosphor, a main peak is shown from a (400) face in accordance with a result of X-ray diffraction.

9. The radiographic image conversion panel of claim 8, comprising: a photostimulable phosphor layer,

wherein the photostimulable phosphor layers contains the photostimulable phosphor using an alkali halide represented by a following general formula (1) as a ground material,

the photostimulable phosphor layer is formed by

spherical phosphor particles and a polymer material,

the photostimulable phosphor layer is formed so as to have a thickness from 50 μm to 20 mm,

the general formula (1) is expressed by

$M^1X \cdot aM^2X'_2 \cdot bM^3X''_3 : eA$ (1)

wherein the M^1 is at least one kind of alkali metal selected from a group consisting of Li, Na, K, Rb and Cs, the M^2 is at least one kind of bivalent metal atom selected from a group consisting of Be, Mg, Ca, Sr, Ba, Zn, Cd, Cu and Ni, the M^3 is at least one kind of trivalent metal atom selected from a group consisting of Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Al, Ga and In, each of the X, the X' and the X" is at least one kind of halogen selected from a group consisting of F, Cl, Br and I, the A is at least one kind of metal atom selected from a group consisting of Eu, Tb, In, Ce, Tm, Dy, Pr, Ho, Nd, Yb, Er, Gd, Lu, Sm, Y, Tl, Na, Ag, Cu and Mg and each of the a, the b and the e represents a numeric value in a range of $0 \leqq a < 0.5$, $0 \leqq b < 0.5$ and $0 < e \leqq 0.2$.

10. The radiographic image conversion panel of claim 8, wherein phosphor fine particles in the photostimulable phosphor are formed by heating at 400°C or more.

11. A photostimulable phosphor precursor, wherein

phosphor particles in the radiographic image conversion panel of claim 8 are formed in a vacuum.

12. A method for forming the photostimulable phosphor precursor of claim 11, comprising:

sequentially forming a liquid membrane phase in a liquid phase containing Cs atoms, and

adding an organic solvent having a solubility different from that of the liquid phase containing Cs atoms under stirring.

13. A photostimulable phosphor obtained by calcining the phosphor precursor of claim 11 at 600 to 800°C.